

# Chemistry: WebElements Periodic Table: Professional Edition: Titanium: thermal properties and temperatures

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## Titanium

22  
**Ti**  
47.867(1)

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Key data; description  
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Biology

### titanium compounds

Reactions of titanium  
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Lattice energies  
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Atom radii  
Valence shell radii

### physical properties

Bulk properties  
(density, resistivity, etc.)  
Thermal properties

## Thermal Properties and temperatures

### Temperatures

View...  
Go!

Melting point [/K]: 1941 [or 1668 °C (3034 °F)]

View...  
Go!

Boiling point [/K]: 3560 [or 3287 °C (5949 °F)] (liquid range: 1619 K)

View...  
Go!

Critical temperature [/K]: no data

View...  
Go!

Superconduction temperature [/K]: 0.40 [or -272.7 °C (-458.9 °F)]

Show elements whose melting point is

K  
sorted  by

Show...

Show elements whose boiling point is

K  
sorted  by

Show...

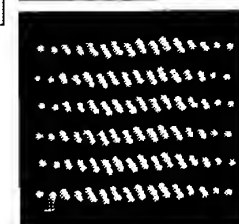
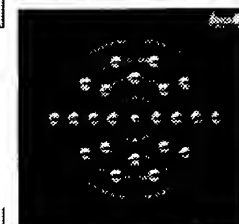
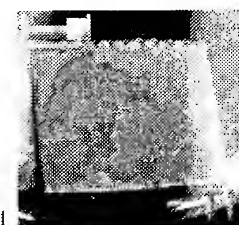
Pick element...

Switch to...

Go!

Go adjacent...

Sc	Ti	V
Y	Zr	Nb



(melting point, etc.)

Thermodynamic  
properties**crystallography**

Crystal structure

[view VR world]

[view pdb image]

**nuclear properties**

NMR

Naturally occurring  
isotopes

Radioisotopes

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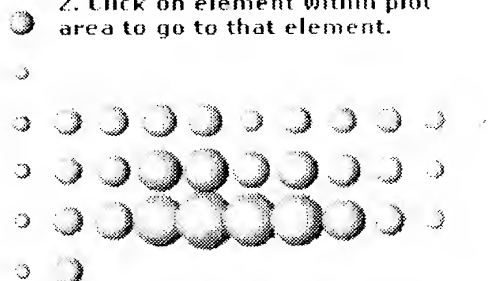
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**Melting point**1. Drag cursor around plot area  
to show information.2. Click on element within plot  
area to go to that element.

Scatter plot

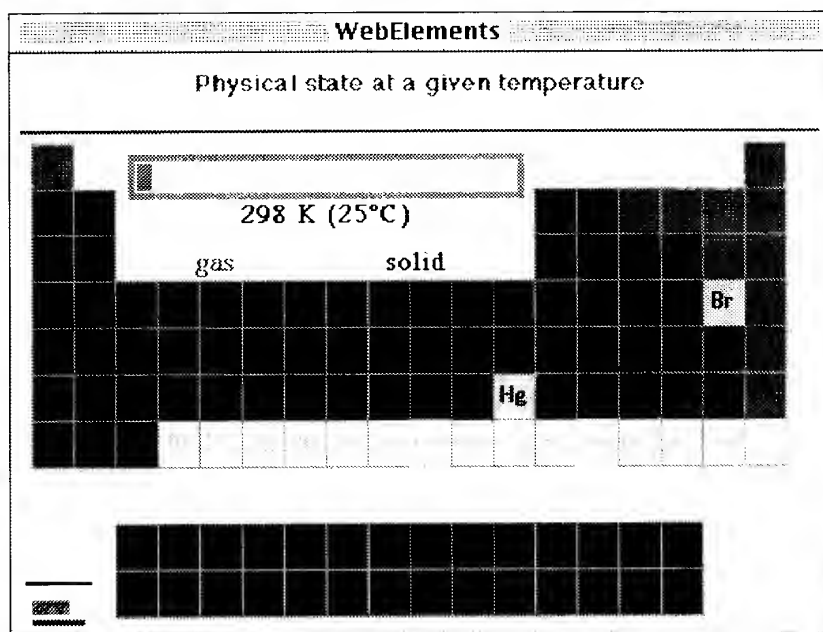
Shaded table

Ball chart

Thermodynamic

Bar chart

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- Animate the above image by animated gif (large file: 270 k)

**Expansion and conduction properties**

View...

Thermal conductivity [ $\text{W m}^{-1} \text{K}^{-1}$ ]:**compounds**Select formula  
from below:**Fluorides** $\text{TiF}_2$  $\text{TiF}_3$  $\text{TiF}_4$ **Chlorides** $\text{TiCl}_2$  $\text{TiCl}_3$  $\text{TiCl}_4$ **Bromides** $\text{TiBr}_2$  $\text{TiBr}_3$  $\text{TiBr}_4$ **Iodides** $\text{TiI}_2$  $\text{TiI}_3$  $\text{TiI}_4$ **Hydrides** $\text{TiH}_2$ **Oxides** $\text{TiO}$  $\text{TiO}_2$  $\text{Ti}_2\text{O}_3$  $\text{Ti}_3\text{O}_5$ **Sulfides** $\text{TiS}$  $\text{TiS}_2$  $\text{Ti}_2\text{S}_3$ **Selenides**

none listed

**Tellurides**

none listed

**Nitrides** $\text{TiN}$

<input type="button" value="Go!"/>	22
<input type="button" value="View..."/>	Coefficient of linear thermal
<input type="button" value="Go!"/>	expansion [ $\text{K}^{-1}$ multiplied by $10^6$ ]:
	8.6

## Enthalpies

<input type="button" value="View..."/>	Enthalpy of fusion [ $\text{kJ mol}^{-1}$ ]: 18.7
<input type="button" value="Go!"/>	
<input type="button" value="View..."/>	Enthalpy of vaporization [ $\text{kJ mol}^{-1}$ ]: 425
<input type="button" value="Go!"/>	
<input type="button" value="View..."/>	Enthalpy of atomization [ $\text{kJ mol}^{-1}$ ]: 471
<input type="button" value="Go!"/>	

Show elements whose enthalpy of fusion is

> or =   $\text{kJ mol}^{-1}$   
sorted  by

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**Chemistry: WebElements Periodic Table: Professional Edition: Tungsten: thermal properties and temperatures**

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**tungsten compounds**

Reactions of tungsten

Compounds

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**electronic properties**

Electronic configuration

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Electron affinities

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Effective nuclear charges

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Atom radii

Valence shell radii

**physical properties**

Bulk properties  
(density, resistivity,

**Tungsten**

74

**W**

183.84(1)

**Thermal Properties and temperatures****Temperatures**

View...  
Go!

Melting point [/K]: 3695 [or 3422 °C (6192 °F)]

View...  
Go!

Boiling point [/K]: 5828 [or 5555 °C (10031 °F)] (liquid range: 2133 K)

View...  
Go!

Critical temperature [/K]: no data

View...  
Go!

Superconduction temperature [/K]: 0.015 [or -273.135 °C (-459.64 °F)]

Show elements whose melting point is  K

sorted  by

Show...

Show elements whose boiling point is  K

sorted  by

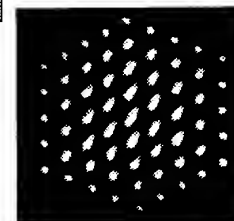
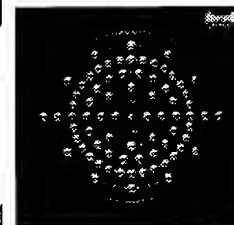
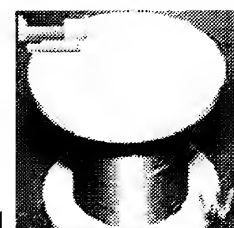
Show...

Pick element...

Switch to...  
Go!

Go adjacent...

Nb	Mo	Tc
Ta	W	Re
Db	Sg	Bh



etc.)

Thermal properties  
(melting point, etc.)  
Thermodynamic  
properties

**crystallography**


Crystal structure  
[view VR world]  
[view pdb image]


**nuclear properties**

NMR  
Naturally occurring  
isotopes  
Radioisotopes

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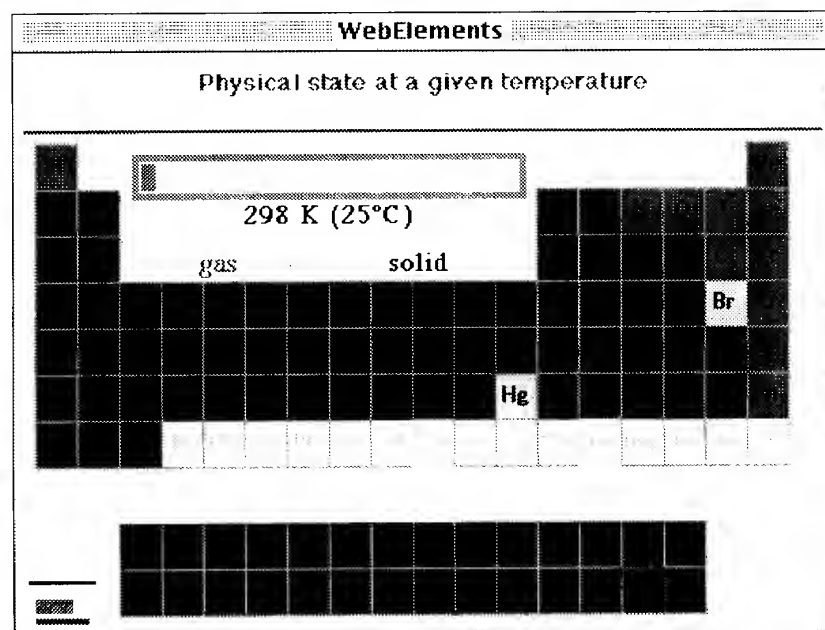
tungsten

**Melting point**


1. Drag cursor around plot area to show information.
2. Click on element within plot area to go to that element.

H	1. Drag cursor around plot area to show information.																He						
Li	Be	2. Click on element within plot area to go to that element.																B	C	N	O	F	Ne
Na	Mg																	Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr						
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe						
Cs	Ba	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn						
Fr	Ra	Lr	Rf	Db	Sg	Bh	Hs	Mt	Uun	Uuu	Uub	Uut	Uuq	Uup	Uuh	Uus	Uuo						
La Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Tm Yb																							
Ac Th Pa U Np Pu Am Cm Bk Cf Es Fm Md No																							

Scatter plot   Shaded table   Ball chart  
Thermometer   Bar chart   



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- Animate the above image by animated gif (large file: 270 k)

**Expansion and conduction properties**View... Thermal conductivity [ $\text{W m}^{-1} \text{K}^{-1}$ ]:**WebElements****compounds**Select formula  
from below:**Fluorides**

$\text{WF}_4$   
 $\text{WF}_6$   
 $[\text{WF}_5]_4$

**Chlorides**

$\text{WCl}_2$   
 $\text{WCl}_4$   
 $\text{WCl}_6$   
 $[\text{WCl}_5]_2$   
 $[\text{W}_6\text{Cl}_{12}]\text{Cl}_6$

**Bromides**

$\text{WBr}_2$   
 $\text{WBr}_3$   
 $\text{WBr}_4$   
 $\text{WBr}_5$   
 $\text{WBr}_6$

**Iodides**

$\text{WI}_2$   
 $\text{WI}_3$   
 $\text{WI}_4$

**Hydrides**

none listed

**Oxides**

$\text{WO}_2$   
 $\text{WO}_3$

**Sulfides** $\text{WS}_2$ **Selenides** $\text{WSe}_2$ **Tellurides** $\text{WTe}_2$ **Nitrides**

none listed

Go! 170  
View...  
Go! Coefficient of linear thermal expansion [ $/K^{-1}$  multiplied by  $10^6$ ]: 4.5

## Enthalpies

View... Enthalpy of fusion [ $/kJ\ mol^{-1}$ ]: 35  
Go!

View... Enthalpy of vaporization [ $/kJ\ mol^{-1}$ ]: 800  
Go!

View... Enthalpy of atomization [ $/kJ\ mol^{-1}$ ]: 860  
Go!

Show elements whose enthalpy of fusion is

> or = 0  $kJ\ mol^{-1}$   
sorted ascending by enthalpy of fusion Show...

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